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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,607	06/05/2006	Guido Becker	ETF-0039	3237

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EXAMINER	
SHERWIN, RYAN W	

ART UNIT	PAPER NUMBER
2612	

NOTIFICATION DATE	DELIVERY MODE
02/23/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/564,607	BECKER ET AL.	
	Examiner	Art Unit	
	Ryan W. Sherwin	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/12/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Status

1. Claims 1-8 are currently pending.

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

2. Claims 3 and 8 objected to because of the following informalities: the acronyms CCD and CMOS need to be spelled out. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Mahbub (U.S. Patent #6,961,443 B2) in view of Okada et al. (Okada; U.S. Patent #6,239,695 B1 provided in PTO-1449).

With respect to claim 1, Mahbub discloses an occupant senor having the following claimed subject matter: the claimed passenger occupancy sensing device met by the occupant sensor (see Abstract); the claimed seat belt buckling status sensing device met by the image analysis system which may be used to sense a buckling status of a seat belt (Column 8, Lines 49-51); the claimed optical imaging system met by the imaging system (see Abstract) and the claimed image evaluation unit met by the image processor (Column 15, Lines 5-7). However, Mahbub does not specially disclose the claimed warning signal.

As shown in Mahbub, the purpose of the reference is to ascertain the usage of the seatbelt so to ensure passenger safety. Thus, it would be advantageous to have the well known feature of a warning to notify the driver/passenger about the usage of the seatbelt as demonstrated in Okada.

Okada teaches a system for detecting seat occupancy and seat belt fastening, then adds a device for outputting a warning signal (see Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the warning device of Okada to the invention of Mahbub because it is not a safe driving condition for a driver or passenger to be in a vehicle

without a seatbelt and alerting the driver or passengers to this condition is an effective and efficient way to quickly change an unsafe condition into a much more safe one.

As per claim 2, Mahbub and Okada render obvious the seat-belt warning device as claimed in claim 1. Mahbub teaches that the claimed the image evaluation unit evaluates a situation image, which has been recorded by the imaging system, as met by the image processor and all components necessary to acquire and process the associated image data (Column 15, Lines 5-7).

Although not explicitly stated by Mahbub that the analysis is done on the basis of contours and/or edges contained in said image, Mahbub does disclose the use of surface characteristics to find the seatbelt's elongated and curved shape (Column 8, Lines 49-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made that in order to determine the elongated and curved shape of the seatbelt, a system must conform to the requirements of locating and analyzing the contours and/or edges of the seatbelt.

Regarding claim 3, Mahbub and Okada render obvious the seat-belt warning device as claimed in claim 1 and Mahbub further discloses that the claimed imaging system comprising a CMOS camera and/or a CCD camera as met by the CCD or CMOS camera of the image system (Column 3, Lines 59-63).

As to claim 4, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 1. Mahbub does not explicitly disclose a belt lock sensor.

However, as the applicant recognizes on Page 1, Lines 24-30 of the pending application, Okada teaches that the device for sensing a buckling status of a seat belt

comprises a belt lock sensor (Column 2, Lines 53-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the lock sensor of Okada with the occupant sensor of Mahbub because the image analysis system will operate more efficiently and error free if it only looks for a seatbelt if it senses one is locked in place.

Concerning claim 5, Mahbub and Okada et al. render obvious the seat-belt warning device as claimed in claim 1 and Mahbub discloses the claimed device for sensing a buckling status of a seat belt is formed by the optical imaging system as seen in claim 1.

With respect to claim 6, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 5. Although Mahbub does not explicitly disclose markings on the seatbelt, it would have been obvious to one of ordinary skill in the art at the time the invention was that the seat belt must have one or more markings which are detectable by the optical system in order for the surface characteristics to be separately detectable from the person or a design on the clothing of a person in order to increase the efficiency and accuracy of such a system.

As to claim 7, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 1 and Mahbub further shows that the claimed optical imaging system comprises a lighting device for illuminating the space which is to be monitored (Column 3, Lines 16-24 disclose the use of additional lighting for the image system. Column 3, Lines 55-63 teach a light pattern generator which both supplies additional lighting and can be used to put markings on the object for analysis purposes).

Concerning claim 8, Mahbub and Okada render obvious the seat-belt warning device as claimed in claim 2 above, and Mahbub continues to disclose that the claimed imaging system comprises a CMOS camera and/or a CCD camera as in claim 3 above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Domens et al. (U.S. Patent #6,439,333 B2) teaches an image processing system with a CMOS camera to determine the location of the occupant in a vehicle in reference to a seatbelt.

2) Hata et al. (U.S. Patent #6,480,616 B1) discloses a system for controlling a seat belt device using image analysis and specifically uses edges and contours.

3) Breed et al. (U.S. Patent App. Publication #2002/0116106 A1) teaches a camera and processor to recognize the presence and position of a vehicle occupant and adjusting the seatbelt.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan W. Sherwin whose telephone number is (571) 270-7269. The examiner can normally be reached on Monday through Friday, 8:30 a.m. through 6:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. W. S./
Examiner, Art Unit 2612

/Daniel Wu/
Supervisory Patent Examiner, Art Unit 2612